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ODORLESS

WATER CLOSET,

R. D. O. Smith's Patents.

February 18, 1873; September 14, 1875; November
2, 1875. Reissued October 19, 1880.

B. F. RYDER, New Haven, Conn.,

GENERAL AGENT.



TO EVERY INTELLIGENT PROPRIETOR.

No person of information will now disregard the importance of throwing every sanitary safeguard around the health and lives of those for whom he builds. While the science of sanitary drainage has, under the pressure of public attention, made very considerable advances from what was considered satisfactory practice a few years ago, all authorities agree that the practice of the best sanitary engineers and plumbers still falls short of what is imperatively demanded.

Mr. GEO. E. WARING, Jr., is probably our best known authority on this subject, and the following extracts from his most recent writings will be received with attention:

"The cardinal fault of all, not even surpassed by the unventilated soil-pipe, is the water closet which is in almost universal use all over Christendom. This is known as the "pan" closet. It probably is not, but it certainly might be, the invention of the devil."

"This container becomes splashed, and soiled, and coated, and furred with an accumulation of fecal matter and urine, which the mere tilting of the pan, with its cupful of water, is powerless to remove, and much of which remains in adhesion to the iron until wasted away by the slow processes of a foul and dangerous decomposition, made still more foul and dangerous by the entire absence of fresh air."

"When the pan is thrown down, after use, the pent-up gases escape through the seat with a stifling whiff familiar to all who have been subjected to it,—as who in a modern city has not been?"

"During the past few years earnest efforts have been made to produce something less objectionable, and two substitutes have attained considerable popularity; one of them is of the class known as the Jennings, which holds water in the bowl and discharges through a valved outlet placed at the side. This closet at first commended itself to all sanitarians, but experience with it has developed a considerable tendency to foulness in connection with the valve, and in the restricted space between the valve and the trap below. The other substitute holds its water in the bowl by a weighted valve closing tightly against its outlet in place of the pan. This also has a second trap below, and the intervening space, while undoubtedly far preferable to the container of the pan closet, is still unclean and unventilated, and the closet is by no means free from serious objection."

"The separation between a water-closet and the soil-pipe cannot be efficiently secured by any mechanical device yet invented. There is as yet in this case no substitute for a good deep water-seal."

"While the ventilation of the interior of the soil and waste pipes is of paramount importance, it is also most desirable to afford a complete ventilation at the house-side of every trap."

Scribner's Magazine, May and June, 1881.

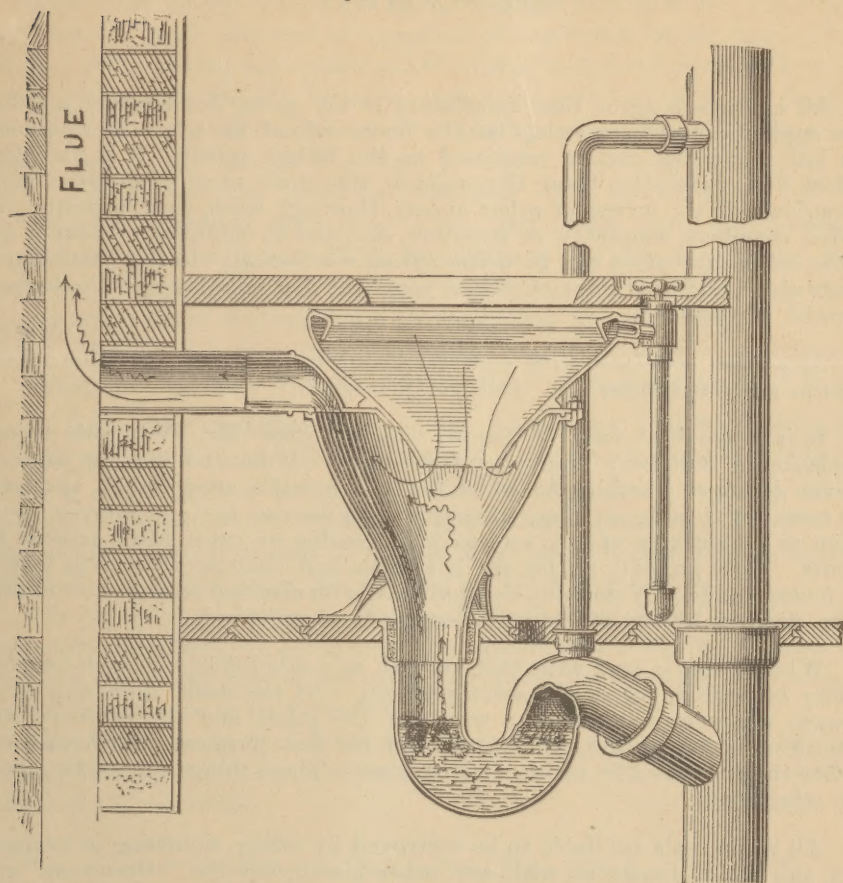
The lesson taught by the above is, that while the science of sanitary drainage has made recent advances, the practice of the best engineers and plumbers still falls short of the requirements of the case. The point where protection fails is at the house side of the trap, and the subject most urgently requiring further improvement is the Water Closet.

All the closets well known in the market are condemned, and the point of condemnation is the absence of ventilation and futile attempts to substitute mechanical valves and large quantities of water.

The remedy for all these evils, though unmentioned by Mr. WARING, is accessible, and is herein presented to you. It is a Water Closet without mechanism, and having its interior spaces completely ventilated.

The Odorless Water Closet,

Invented by R. D. O. SMITH.



Here is VENTILATION COMPLETE at the house side of the trap—in the water closet itself—not over the closet, or under the seat, or by a little hole in the side of the bowl, or the enclosure around the closet (all of which pretences to ventilation have been resorted to, and have invariably proved futile) but in its very interior; just where the gases emanate; they are there subjected to that constant flow of atmospheric air which complete ventilation and their removal require.

The gas-trap, constituted by the space surrounding the lower portion of the bowl, with the outlet placed within said space above the lowest part of the bowl, enables the inward flow of fresh air, *however feeble*, to deflect the gases away from the neck of the bowl and guide them to the flue; thus rendering this closet positively proof against the escape of exhalations or sewer gas into the house.

These closets have been in the market since 1873; thousands of them are in daily use, and the fact of their efficiency has been most thoroughly established, every one having proved entirely satisfactory. It is invariably said no smell is found about them—not even while being used.

REMARKS.

All sanitarians agree that ventilation is the great desideratum, and has been applied everywhere except at the house side of the trap. In this closet this last remaining part is ventilated to the fullest extent. It is therefore evident that, ventilation being the essential, this closet *must give satisfaction*. It combines all the merits of other closets, thorough wash, easy inspection, no hidden chambers, simplicity of structure, etc., and in addition to them *it has all the advantage which can be derived from ventilation*. In this particular it stands alone, and it is now everywhere conceded that ventilation is the highest essential of them all.

As a base ventilator it is ever correcting the sanitary condition of the room in which it stands.

It is a modified form of hopper closet. (See Mr. WARING's recommendation in *Scribner's Magazine*, June 1881.) It has no moving parts to become deranged; nothing by which the interior walls are splashed, spattered and coated with soil; no plug, valve or pan to become foul; no interior mechanism or complexity of any sort to give trouble or cause after expense for repairs. Once properly set for use, it will last and continue efficient as long as the house stands. Water may be introduced with constant stream, slow closing valve, flush, or by any of the known methods, as preferred.

While water is used with this, as with any other closet, in such quantity as may be desired, yet, it will serve perfectly *with less water than any other*, because water is only used to wash out the pipes, and the ordinary slop water from bed chambers, etc., is sufficient for that purpose. Without water service the closet is still usable and odorless. These things cannot be said of *any other closet*.

All water seals are liable to be destroyed by either siphoning or evaporation, and this is disastrous with any other closet; but the "ODORLESS" will still continue faithful.

With any other closet, warmth in the apartment is a cause for the emission of odors from the closet, but with the "Odorless" warmth in the room improves the ventilation. *This fact alone cannot be overestimated in its value to life and health, and it will be specially appreciated by invalids, and the aged and feeble.*

The container is mounted upon legs and the plumber is enabled to make sure of a tight joint at its connection with the soil pipe. And a conical flange descending around the neck of the bowl holds the putty or cement against said neck, and makes a strong union between the bowl and container. In the cut the modern and most approved plan of soil pipe connections is shown, but not claimed as especially essential to this closet.

Ventilating pipes are usually made 3 inches in diameter and are often run 20 to 60 feet to reach a chimney flue; sometimes, by turning down and running under the floor, in other instances following along the walls, or in new houses being built, provision is made in the walls. If a chimney flue is not desired or cannot conveniently be reached, then the pipe may be taken directly up through the roof to a height favorable for all breezes.

HISTORICAL REMARK.

This invention was patented in 1873. At that time there was not a closet in the market which provided any pretense of ventilation of the bowl or trap. The idea of ventilating these places was scouted as useless and chimerical. About 1875 a closet quite largely in use provided an outlet neck on the front or soil pipe side of the trap for so-called ventilation of the trap. To-day nearly every closet in the market has some sort of a vent pipe connection, and makes pretense that the closet is ventilated. The Odorless was not only the first which provided ventilation of any part of the water closet bowl or trap, but it is the only one which has yet provided any true or adequate ventilation of these parts. It therefore is the only closet which does or can prevent drain odors and sewer gas from escaping into the room.

What the "Sanitary Protection Association" of Newport think of it.

At the regular monthly meeting of the Association, held September 13th, 1881, it was voted to add to the directions relating to household safety, contained in the "Circular Letter No. 1," of the Association, a clause calling attention to the imperative necessity of ventilating the interior chamber of the water closet. It was decided to append it as an additional inquiry to those propounded to householders, the wording of which is as follows:

"Is provision made for ventilation of the interior of the water closet—the so-called collector or receiver—by a current of air flowing through the same to a ventilating pipe or flue extending above the house top, and independent of the soil pipe or its extension?"

This action on the part of the Association is prompted by the successful working of the "Odorless" closet which has been placed in their residences by several of the members.

[*From the Sanitarian, Dec., 1878.*]

The requirements of a good water closet may be concisely stated to be—simple in construction, not liable to get out of order, work efficiently with a minimum amount of water, and inodorous; conditions which would unquestionably condemn nine-tenths of the water-closets commonly found in use, as intolerable nuisances.

One of the earliest and best improvements of the hopper and pan closets is the Odorless Water-Closet, invented several years ago by Mr. R. D. O. Smith, of Washington, D. C. It consists of an earthenware bowl which projects into an iron receiver, which receiver, however, contains no pan or working parts within it, being tapered and trapped the same as an ordinary hopper closet, and set in the same way; but the top of it is provided with a flat cover, and out of this, by the side of the projecting bowl, springs a ventilating tube. Emanations from the foul hopper or trap, by a well known property of moving gases, cling to the surface, ascend to the *cul-de-sac* under the flat top between the projecting neck of the bowl and the receiver, then find means of escape through the ventilator. It is the best closet in the market.

[*From the Metal Worker, Nov. 17, 1874.*]

The escape of poisonous odors and gases of sewage decomposition into the habitations of men has attracted the attention of sanitarians and the medical profession everywhere that the modern conveniences of house water closets have been introduced. As a source of sickness its effects have been well recognized.

In my estimation, one of the principal causes of the great infant mortality of cities is due to the constant poisoning of the air within doors by the escape of these poisonous gases through defective sewerage, drainage, and plumbing. Almost every physician in the city has recognized this source as the cause of serious illness, and even death among his patrons. The application of your improvements offers a remedy for these dangers to health and life long sought for.

The greatest disinfectant yet discovered is an abundance of pure air, and the rapid diffusion of poisonous gases into the upper atmosphere is the safest and surest method of preventing their disastrous effects. The application of this improvement to the water closets, whether in dwellings, stores, hotels, public places, tenement houses, or wherever sewerage is deposited by the system of water carriage, cannot fail to supply the long needed desideratum.

For several years, both before and during my official connection with the Health Department of this city, I advocated the principle you have so admirably applied. Your new application directly to the water closet will obviate the escape into the rooms of those poisonous mephitic gases, rising through the house drain or soil pipe from the main street sewer.

Very few are aware of the fact that there is often a hydrostatic force that exhausts all the water from the traps in the waste and soil pipes of the houses connected with the street sewer. It occurs during showers, when a rush of water takes place through the house leaders into the lower portion of the main drain pipe. This, as a consequence, makes a free inlet into almost every room in the house, thus admitting the lighter offensive and noxious gases, which are forced upward and into the rooms by this same hydrostatic pressure. By the use of your "Odorless water closet" improvement, this is rendered impossible, as a means is provided for the free, unobstructed outlet for the escape of these gases into the external air, while the water traps remain intact.

I hope the application of your improvement may be universally made wherever such appliances are used, and it would seem almost an imperative duty with the health authorities that its use should be compulsory in every domicile within their jurisdiction.

It needs but a moment's reflection to convince every thinking mind of the necessity of applying this simple, cheap and efficient remedy to obviate this great danger to the lives and health of a defectively drained and sewer ridden city.

MOREAU MORRIS, M.D.

Ex-Sanitary Superintendent, New York City.

[*From The Home Messenger, Detroit, Sept., 1878.*]

It is now eight months since we introduced into the Home of the Friendless Nursery the Odorless Closet, patented by Mr. R. D. O. Smith, since which time we have had no diphtheria, no fevers, no dysentery—diseases which, in years past, told fearfully upon our little children. Grandma McKenzie says “she cannot tell how it does it, but she never saw anything clean smells out of a bathroom like that patent fandango.” When one considers that we have but one closet for over thirty very young children, we feel that we cannot express too much gratitude for this valuable invention. Our attention was called by chance to Mr. Smith’s patent, but we most earnestly desire to call the attention of those having school or family closets under their control, to the immense sanitary benefit of our Odorless Closet. When we put it up, one person after another expressed their own doubts, theories and distrusts of its efficiency, but as the proof of the pudding is the eating thereof, and we have proved this to our satisfaction, we earnestly recommend its adoption in private and public schools, and private families.

I. G. D. S.

[*From the Metal Worker, Nov. 7, 1874.*]

The novelty of the invention consists in the application of a ventilating current which carries off all offensive and unwholesome gases through an outlet placed above the highest point at which any such gas can be generated. The effect of this arrangement is to make it easier for the gas to escape with the current through the outlet, than to force its way against the current and up through the hopper into the apartment in which it is placed. While it may be difficult, if not impossible to turn back a current of gas, it is easy to deflect and control its movements in any given direction. The inventor claims that this closet is entirely inodorous, and may be placed in bedrooms or apartments without prejudice to health or comfort. Its freedom from mechanical complications of all kinds, and the simplicity of its construction, makes it cheaper than other forms of water closets which do not possess its sanitary merits.

[*From the Scientific American, Nov. 20, 1875.*]

Traps are designed to suppress and keep in confinement the gaseous products of sewer decomposition. We have repeatedly pointed out, however, the defects of the trap system, and expressed the opinion that the best precaution is found in properly directed ventilation, by which the noxious exhalations will be harmlessly carried away. We are therefore able to pronounce favorably upon the invention herewith illustrated, which is based upon the ventilating principle, and in which the bowl is directly connected with a chimney or other flue, through which a draft of air will be caused to flow upward and be discharged above the house top. It will be perceived that this arrangement merely constitutes a siphon, the long leg of which is the flue, and the short leg the bowl of the water closet, and that the well known siphon must ensue.

16 Set in one row Ventilated by a Single Flue

in the Interior Department Building at Washington, D. C.; there are 36 in the building. With the closets formerly there and water running constantly, the odor was always present in the adjoining hallway; now there is no trace of excremental odor in the apartment itself.

At Hygeia Hotel, Fortress Monroe,

there are seventy-five of these closets in use, many of them having been for nearly four years. On April 1st, 1881, Mr. Phoebeus, the proprietor, in a letter to Mr. Smith, said:

"In my opinion your closet is without exception ahead of any in the market of the United States, and I believe I have had as good an opportunity of seeing what good closets are as any man in the country. You have never come to see me to see whether they are working right or not, but if you will take my word for it, they are all you claim for them; and I have unhesitatingly recommended them."

Flue Connections.

A current of air flowing through its interior chamber is the essential requisite for an odorless water closet, and it is for this reason that flues are employed; complete ventilation of the house side of the trap is thus secured. All bad smells emanate from the house side of the trap whether they originate there or not, and therefore, that is where ventilation is most needed.

Kitchen chimneys or other inside flues or flues constituted by the ventilating pipe itself running independently direct through the roof are preferred. *Artificial heating is not necessary*; though heating gives additional force to the draft, that additional force is not required. Any properly constructed inside flue terminating above obstructions to the breezes may be relied upon for adequate ventilation. If it is necessary to connect with a flue which is badly located—one which the wind sometimes blows down, then it is best to fix the flue, not that anything specially hurtful can result from it, for it can blow only pure air from the skies, but it is not carrying out the plan perfectly. Upon reflection it is evident that even if connected with a poor flue this closet is infinitely better than those not ventilated at all, though hogsheads of water be used instead.

Its Chief Points.

- 1st. Perfect ventilation of the house side of the trap and its interior chamber, making it inodorous equally while in use and afterwards.
- 2d. Absence of mechanical complications and simplicity of construction.
- 3d. Works efficiently with less water than any other closet, yet, is capable of using as much as any other.
- 4th. Requires less care than others to keep it in cleanly condition.
- 5th. In case of siphoning or evaporation of the water in traps it still protects the house from soil pipe air, hence, it is a safe closet to leave when the house is unoccupied.

For further information, address the general agent,

B. F. RYDER, New Haven, Conn.

Office with the N. H. Pipe Co., 326 Grand Street.

Sold by PECK BROS. & CO.,

73 Beekman St., New York. 72 Franklin St., New Haven.